



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,130	01/23/2004	Mohan R. Duggi	2003.08.010.WT0	6103
23990	7590	05/18/2009		
DOCKET CLERK P.O. DRAWER 800889 DALLAS, TX 75380			EXAMINER BRANDT, CHRISTOPHER M	
			ART UNIT	PAPER NUMBER
			2617	
			MAIL DATE	DELIVERY MODE
			05/18/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/764,130	<b>Applicant(s)</b> DUGGI ET AL.	
	<b>Examiner</b> CHRISTOPHER M. BRANDT	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

This Action is in response to applicant's amendment filed on March 9, 2009. **Claims 1-20** are still currently pending in the present application.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

However, the examiner notes that Nelson substantially discloses the claimed invention including routing data packets. The particular feature that Nelson fails to disclose is the particular Mobile Ad Hoc Network (MANET). Implementing the routing of data packets into a MANET is not considered a novel feature and that is why the examiner has relied upon Lipasti, Gillies, and Elliott.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 2617

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1-20** are rejected under 35 USC 103(a) as being unpatentable over **Nelson (US Patent 6,292,838 B1)** in view of **Lipasti (US PGPUB 2002/0039357 A1)** in view of **Gillies et al. (US PGPUB 2003/0212821 A1, hereinafter Gillies)** and further in view of **Elliott et al. (US Patent 6,985,476 B1, hereinafter Elliott)**.

Consider **claim 1 (and similarly applied to claim 11)**. Nelson discloses the invention for use in a communication network formed by a plurality of devices, a first device capable of routing data packets, said first device comprising:

a radio frequency (RF) transceiver capable of communicating with other ones of said plurality of devices (column 10 lines 4-28, read as the router transmits the received packet); and

a controller capable of receiving incoming data packets from said RF transceiver and sending outgoing data packets to said RF transceiver, wherein said controller is further capable of intercepting a first data packet associated with at least one of: the incoming data packet and the outgoing data packet, determining a first MAC layer address associated with said first data

packet, and adding said first MAC layer address to said first data packet (column 10 lines 4-28, read as when an incoming packet, destined for a network device on a specific subnet, arrives at a router, the router searches the ARP cache to find a MAC address. If the router finds a corresponding MAC address, then the packet can be converted to include the new MAC address).

Nelson discloses the claimed invention except he fails to teach a mobile ad hoc network (MANET) and that the communication is wireless.

However, Lipasti discloses a mobile ad hoc network (MANET) and that the communication is wireless (paragraph 22, read as the invention can be used in any kind of mobile ad hoc network such as a network according to the IEEE 802.11 WLAN (Wireless Local Area Network).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Lipasti into the invention of Nelson in order to implement this network in a Bluetooth network or a Wireless Local Area Network (paragraph 22).

In addition, Nelson and Lipasti fail to disclose implementing a MANET routing protocol at a medium access control (MAC) layer.

However, Gillies teaches implementing a MANET routing protocol at a medium access control (MAC) layer (paragraph 48, 66, read as the virtual MAC layer is configured to carry other routing protocols, where the network can be an ad hoc network or a persistent network and can be fixed in location, mobile).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Gillies into the invention of Nelson and Lipasti in order to significantly increases the portability and usefulness of the network device when connected to other systems, for example when deployed on a network segment using a different routing protocol (paragraph 66).

Moreover, Nelson, Lipasti, and Gillies fail to explicitly disclose a MANET Routing Protocol module.

However, Elliott teaches a MANET Routing Protocol module (column 5 lines 29-40, read as MANET routers).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Elliott into the invention of Nelson, Lipasti, and Gillies in order to provide greater flexibility in networks having mobile routers (column 5 lines 59-60).

Consider **claim 2 (and claim 12) and as applied to claim 1**. Nelson and Lipasti disclose wherein said controller determines said first MAC layer address associated with said first data packet by determining a first destination MANET node associated with said first data packet (Nelson; column 10 lines 4-28).

Consider **claim 3 (and claim 13) and as applied to claim 2**. Nelson and Lipasti disclose wherein said controller further determines said first MAC layer address associated with said first data packet by determining a first route coupling said first MANET node and said first destination MANET node (column 9 line 35 – column 10 line 3, Lipasti; paragraph 8, 26, 27).

Consider **claim 4 (and claim 14) and as applied to claim 3**. Nelson and Lipasti disclose wherein said controller determines said first route by looking up said first route in a routing table associated with said first MANET node (Nelson; column 12 lines 14-32, Lipasti; paragraphs 84, 87, 99).

Consider **claim 5 (and claim 15) and as applied to claim 4**. Nelson and Lipasti disclose wherein said controller looks up said first route using an IP address associated with said first data packet (column 12 lines 14-32).

Consider **claim 6 and 7 (and claims 16 ad 17) and as applied to claim 3**. Nelson and Lipasti disclose wherein said controller forwards said first data packet containing said first MAC layer address to said first destination MANET node by transmitting said first data packet to a next sequential MANET node in said first route and wherein said first MAC layer address is associated with said next sequential MANET node in said first route (Nelson; column 3 lines 49-57, column 10 lines 4-28, Lipasti; paragraph 26).

Consider **claim 8 (and claim 18)and as applied to claim 6**. Nelson and Lipasti disclose wherein said controller is further capable of receiving a second data packet from a medium access control (MAC) layer associated with said first MANET node and determining if said second data packet contains a MAC layer address associated with said first MANET node (Nelson; column 10 lines 4-28, Lipasti; paragraph 27).

Consider **claim 9 (and claim 19) and as applied to claim 8**. Nelson and Lipasti disclose wherein said controller, in response to a determination that said second data packet does contain

a MAC layer address associated with said first MANET node, routes said second data packet to a second destination MANET node (Nelson; column 10 lines 4-28, Lipasti; paragraph 27).

Consider **claim 10 (and claim 20) and as applied to claim 9**. Nelson and Lipasti disclose wherein said controller, in response to a determination that said second data packet does not contain a MAC layer address associated with said first MANET node, stores Internet protocol (IP) information associated with said second data packet in a routing table associated with said first MANET node (Nelson; column 12 lines 14-32, Lipasti; paragraphs 84, 87, 99).

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents  
P.O. Box 1450



Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street

Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Brandt whose telephone number is (571) 270-1098.

The examiner can normally be reached on 7:30a.m. to 5p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 2617

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Christopher M. Brandt

C.M.B./cmb

May 11, 2009

/George Eng/

Supervisory Patent Examiner, Art Unit 2617